

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 6 to 11 with claims 10 and 11 being withdrawn from consideration.

Claims 6 to 9 and 12 to 15 have been rejected under 35 U.S.C. 103(a) as unpatentable over Kawamura et al. (US. 6,706,431).

This rejection is respectfully traversed.

The present invention concerns methane adsorptivity of the carbon nanohorn on which a lanthanide metal is disposed. Kawamura et al. merely refers to hydrogen adsorptivity of fullerenes that encapsulate lanthanide therein.

Accordingly, the discussion about the methane adsorptivity of fullerenes which encapsulate lanthanide therein, on the basis of the knowledge disclosed in Kawamura et al. is highly speculative, at best. The art-skilled person would not make a deduction concerning methane adsorptivity from knowledge about hydrogen adsorptivity. Thus, the theory of the rejection is untenable from a scientific viewpoint.

In addition, the object material of Kawamura et al. is fullerenes which are very different from the object material of the present invention (carbon nanohorns). There is no basis on which to deduce the change of methane adsorptivity of carbon nanohorns from the disclosure of Kawamura et al., because carbon nanohorns are a very different material from fullerenes.

The experimentally determined fact that the methane adsorptivity did not change in the case where Eu is disposed on an activated carbon fiber A10 (Fig. 2 of the present specification) and discussion bridging pages 7 and 8 of the specification, illustrate the unpredictability regarding methane adsorption by different carbon materials.

The prediction of adsorptivity or adsorbing phenomenon of methane from materials of different types, as made by the rejection, from the reference teaching of the addition of lanthanum to fullerenes and other families of carbon concerning adsorption of hydrogen, is thus untenable.

Applicants have found that the methane adsorptivity of single walled carbon nanohorns (SWNH) increases remarkably by depositing the lanthanide metal on the SWNH (see again Fig. 2 of the present specification). This cannot be deduced from Kawamura et al.

Accordingly, the presently claimed material exhibits properties unobvious from any teaching of Kawamura et al.

Upon allowance of the presently claimed SWNH materials of claims 6 to 9, rejoinder of withdrawn claims 10 and 11 is respectfully requested.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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